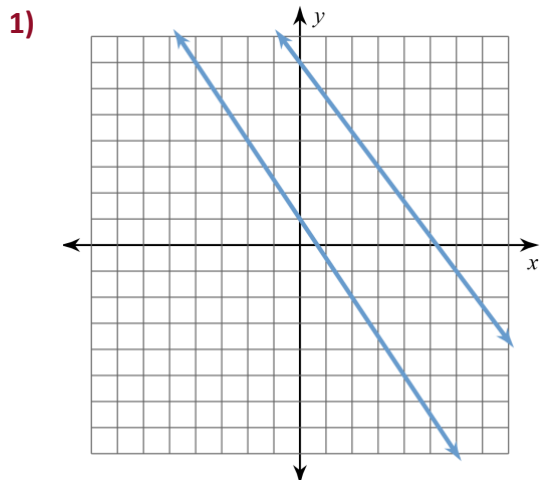


GUIDED NOTES: EQUATIONS OF PARALLEL LINES

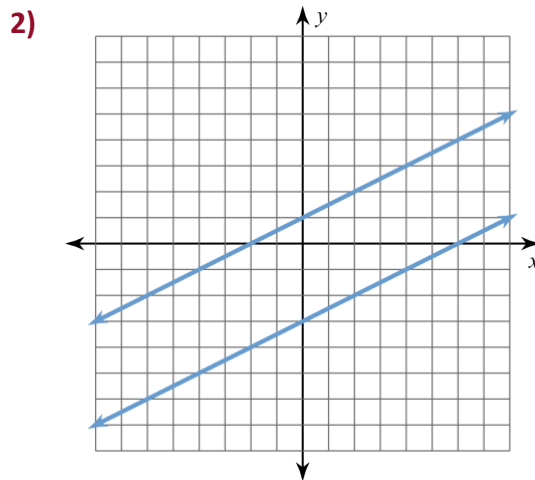
Are These Lines Parallel?

Determine if each pair of lines are or are not parallel. Explain your thinking.



The slopes of the lines are $-\frac{3}{2}$ and $-\frac{4}{3}$.

The slopes are not the same, so the lines are not parallel.



The slopes of the lines are $\frac{1}{2}$ and $\frac{1}{2}$.

The slopes are the same, so the lines are parallel.

Writing Equations

Write an equation of the line that has the given properties.

- 3) The line passes through $(2, 1)$ and is parallel to $y = 3x + 5$.

$$m = 3, \text{ point } : (2, 1)$$

$$y - y_1 = m(x - x_1)$$

$$y - (1) = (3)(x - (2))$$

$$y - 1 = 3x - 6$$

$$y = 3x - 5$$

- 4) The line passes through $(-1, 4)$ and is parallel to $y - 4 = -2(x - 3)$.

$$m = -2, \text{ point } : (-1, 4)$$

$$y - y_1 = m(x - x_1)$$

$$y - (4) = (-2)(x - (-1))$$

$$y - 4 = -2x - 2$$

$$y = -2x + 2$$